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Response to Final Office Action Dated 12/14/2004

AMENDMENTS TO THE CLAIMS**Claims pending**

- At time of the Action: Claims 1-40.
- After this Response: Claims 1-40.

Canceled or Withdrawn claims: None**Amended claims: None****New claims: None**

1. (Previously Presented) A method in a server-client environment, the method comprising:

receiving at the server a driver identifier for a printer that is attached to the client;

using the driver identifier to select a closest matching driver of a plurality of drivers to install at the server; and

installing, at the server and not at the client, the selected driver in order to enable applications executing on the server to print to the printer using the installed driver.

2. (Previously Presented) A method as recited in claim 1, wherein the receiving comprises receiving the driver identifier from the client.

3. (Original) A method as recited in claim 1, wherein the driver identifier includes both a driver name and a driver version.

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1 4. (Original) A method as recited in claim 1, wherein the using
2 comprises accessing a library at the server that stores the plurality of drivers.

3
4 5. (Original) A method as recited in claim 1, wherein:
5 the using comprises checking whether any of the plurality of drivers has a
6 corresponding driver identifier that is the same as the received driver identifier;
7 and
8 if a particular driver of the plurality of drivers has a corresponding driver
9 identifier that is the same as the received driver identifier, then selecting that
10 driver to install at the server.

11
12 6. (Original) A method as recited in claim 1, wherein:
13 the using comprises checking whether any of the plurality of drivers
14 currently has a corresponding driver identifier that is different than the received
15 driver identifier but that corresponds to the same driver as the received driver
16 identifier; and
17 if a particular driver of the plurality of drivers currently has a corresponding
18 driver identifier that is different than the received driver identifier but that
19 corresponds to the same driver as the received driver identifier, then selecting that
20 driver to install at the server.

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1 7. (Original) A method as recited in claim 6, wherein one of the
2 plurality of drivers currently has a corresponding driver identifier that is different
3 than the received driver identifier but that corresponds to the same driver because
4 of a driver name change by a source of the driver.

5
6 8. (Original) A method as recited in claim 6, further comprising:
7 issuing a notification that the selected driver currently has a corresponding
8 driver identifier that is different than the received driver identifier but that
9 corresponds to the same driver as the received driver identifier.

10
11 9. (Original) A method as recited in claim 1, wherein:
12 the receiving comprises receiving a driver name and a driver version;
13 the using comprises checking whether any of the plurality of drivers has a
14 corresponding driver name that is the same as the received driver name; and
15 if a particular driver of the plurality of drivers has a corresponding driver
16 name that is the same as the received driver name, then selecting that driver to
17 install at the server.

18
19 10. (Original) A method as recited in claim 9, further comprising:
20 selecting a first driver with a corresponding driver name that is the same as
21 the received driver name to install at the server without regard for whether the
22 received driver version is the same as a corresponding driver version of the first
23 driver.

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11. (Original) A method as recited in claim 9, further comprising:
issuing a notification that the selected driver has a corresponding driver
name that is the same as the received driver name but a corresponding driver
version that is different than the received driver version.

12. (Original) A method as recited in claim 9, further comprising:
checking whether the selected driver has a corresponding driver version
that is the same as the received driver version; and
if the selected driver does not have a corresponding driver version that is
the same as the received driver version, then obtaining a new copy of the driver
that has the same driver version as the received driver version.

13. (Original) A method as recited in claim 12, further comprising
obtaining a new copy of the driver only if the received driver version indicates a
more recent version of the driver than is indicated by the driver version
corresponding to the selected driver.

14. (Original) At least one computer-readable memory containing a
computer program that is executable by a processor to perform the method recited
in claim 1.

15. (Previously Presented) A method implemented in a server in a
server-client environment, the method comprising:
automatically selecting at least one of a plurality of drivers corresponding
to a peripheral device attached to the client; and

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1 installing, at the server and not at the client, the selected at least one driver
2 wherein the server can interface with the peripheral device using the driver to
3 cause the selected at least one driver to perform an action at the peripheral device
4 using the driver.

5
6 16. (Original) A method as recited in claim 15, wherein the peripheral
7 device comprises a printer.

8
9 17. (Original) A method as recited in claim 15, wherein the
10 automatically selecting comprises using a received driver identifier corresponding
11 to a printer to select a closest matching driver of the plurality of drivers to install at
12 the server.

13
14 18. (Original) A method as recited in claim 15, wherein:
15 the automatically selecting comprises checking whether any of the plurality
16 of drivers has a corresponding driver identifier that is the same as a received driver
17 identifier; and

18 if a particular driver of the plurality of drivers has a corresponding driver
19 identifier that is the same as the received driver identifier, then installing that
20 driver at the server.

21
22 19. (Original) A method as recited in claim 15, wherein:
23 the automatically selecting comprises checking whether any of the plurality
24 of drivers currently has a corresponding driver identifier that is different than a
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1 received driver identifier but that corresponds to the same driver as the received
2 driver identifier; and

3 if a particular driver of the plurality of drivers currently has a corresponding
4 driver identifier that is different than the received driver identifier but that
5 corresponds to the same driver as the received driver identifier, then installing that
6 driver at the server.

7
8 20. (Original) A method as recited in claim 19, further comprising:

9 issuing a notification that the installed driver currently has a corresponding
10 driver identifier that is different than the received driver identifier but that
11 corresponds to the same driver as the received driver identifier.

12
13 21. (Original) A method as recited in claim 15, wherein:

14 the automatically selecting comprises checking whether any of the plurality
15 of drivers has a corresponding driver name that is the same as a received driver
16 name; and

17 if a particular driver of the plurality of drivers has a corresponding driver
18 name that is the same as the received driver name, then installing that driver at the
19 server.

20
21 22. (Original) A method as recited in claim 21, further comprising:

22 selecting a first driver with a corresponding driver name that is the same as
23 the received driver name to install at the server without regard for whether a
24 received driver version is the same as a corresponding driver version of the first
25 driver.

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2 23. (Original) A method as recited in claim 21, further comprising:

3 issuing a notification that the installed driver has a corresponding driver
4 name that is the same as the received driver name but a corresponding driver
5 version that is different than the received driver version.

6
7 24. (Original) A method as recited in claim 21, further comprising:

8 checking whether the installed driver has a corresponding driver version
9 that is the same as a received driver version; and

10 if the selected driver does not have a corresponding driver version that is
11 the same as the received driver version, then obtaining a new copy of the driver
12 that has the same driver version as the received driver version.

13
14 25. (Previously Presented) The method of claim 15, wherein at least one
15 computer-readable memory contains a computer program that is executable by a
16 processor to perform the method.

17
18 26. (Previously Presented) One or more computer-readable media
19 having stored thereon a computer program that, when executed by one or more
20 processors of a server in a client-server system, causes the one or more processors
21 to:

22 receive a printer driver identifier for a printer attached to a client;

23 use the printer driver identifier to select one of a plurality of printer drivers
24 to install at the server and not at the client according to the following,
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1 if a particular printer driver of the plurality of printer drivers has a
2 corresponding printer driver identifier that is the same as the received
3 printer driver identifier, then selecting that particular driver,

4 if a particular printer driver of the plurality of printer drivers
5 currently has a corresponding printer driver identifier that is different than
6 the received printer driver identifier but that corresponds to the same printer
7 driver as the received printer driver identifier, then selecting that particular
8 printer driver, and

9 if a particular printer driver of the plurality of printer drivers has a
10 corresponding driver name that is the same as a driver name received as
11 part of the printer driver identifier, then selecting that particular printer
12 driver without regard for whether that particular printer driver has a
13 corresponding driver version that is the same as a driver version received as
14 part of the printer driver identifier; and

15 install the selected printer driver at the server in order to enable the
16 selected printer to print.

17
18 27. (Original) A method as recited in claim 26, wherein the server
19 comprises a terminal server and wherein the client comprises a terminal server
20 client.
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1 28. (Original) A method as recited in claim 26, wherein one of the
2 plurality of printer drivers currently has a corresponding printer driver identifier
3 that is different than the received printer driver identifier but that corresponds to
4 the same printer driver due to a name of the printer driver being changed.

5
6 29. (Previously Presented) An apparatus comprising:
7 a driver library including a plurality of printer drivers; and
8 a driver matching module to select at least one of the plurality of printer
9 drivers to be installed on the apparatus to enable a printer attached to a client
10 connected with the apparatus to print, wherein the driver is installed on the
11 apparatus and not the client.

12
13 30. (Previously Presented) An apparatus as recited in claim 29, wherein
14 the driver matching module further:

15 checks whether any of the plurality of drivers has a corresponding driver
16 identifier that is the same as a received driver identifier; and

17 wherein if a particular driver of the plurality of drivers has a corresponding
18 driver identifier that is the same as the received driver identifier, then install that
19 driver at the server.

20
21 31. (Previously Presented) An apparatus as recited in claim 29, further
22 comprising:

23 a mapping table to map previous driver identifiers to subsequent driver
24 identifiers;

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1 wherein the driver matching module further checks the mapping table to
2 determine whether any of the plurality of drivers currently has a corresponding
3 driver identifier that is different than a received driver identifier but that
4 corresponds to a same printer driver as the received printer driver identifier; and
5 if so, then installs the corresponding printer driver at the server.

6
7 32. (Previously Presented) An apparatus as recited in claim 29, wherein
8 the driver matching module further:

9 checks whether any of the plurality of printer drivers has a corresponding
10 driver name that is the same as a received driver name; and

11 wherein if a particular printer driver of the plurality of printer drivers has a
12 corresponding driver name that is the same as the received driver name, then
13 install that printer driver at the server without regard for whether that particular
14 printer driver has a corresponding driver version that is the same as a received
15 driver version.

16
17 33. (Previously Presented) A system comprising:

18 a client computer having a local printer attached thereto; and

19 a server computer coupled to the client computer via a network, wherein the
20 server computer includes,

21 a driver library including a plurality of printer drivers, and

22 a driver matching module to select at least one of the plurality of
23 printer drivers for installation on the server computer and not the client
24 computer to allow applications executing on the server computer to print to
25 the local printer, the driver matching module selecting one of the plurality

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1 of printer drivers for installation based on a printer driver identifier and
2 according to the following,

3 if a particular printer driver of the plurality of printer drivers
4 has a corresponding printer driver identifier that is the same as the
5 received printer driver identifier, then selecting that particular driver
6 for installation in order to enable the local printer to print,

7 if a particular printer driver of the plurality of printer drivers
8 currently has a corresponding printer driver identifier that is different
9 than the received printer driver identifier but that corresponds to the
10 same printer driver as the received printer driver identifier, then
11 selecting that particular printer driver for installation in order to
12 enable the local printer to print, and

13 if a particular printer driver of the plurality of printer drivers
14 has a corresponding driver name that is the same as a driver name
15 received as part of the printer driver identifier, then selecting that
16 particular printer driver without regard for whether that particular
17 printer driver has a corresponding driver version that is the same as a
18 driver version received as part of the printer driver identifier for
19 installation on the server computer in order to enable the local
20 printer to print.

21
22 34. (Previously Presented) A system as recited in claim 33, wherein the
23 client computer transmits the printer driver identifier to the server computer.
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1 **35. (Previously Presented)** A computer readable medium having
2 computer executable instructions, which when executed by a processor, causes the
3 processor to:

4 receive at a server a driver identifier for a printer that is attached to a client
5 connected with the server, wherein the server can print information at the client;

6 use the driver identifier to select a closest matching driver of a plurality of
7 drivers to install at the server, and not at the client; and

8 install, at the server, the selected driver in order to enable applications that
9 are executing to print to the printer using the installed driver.

10
11 **36. (Previously Presented)** The computer-readable media of claim 35,
12 wherein said applications run on the server.

13
14 **37. (Previously Presented)** The computer-readable media of claim 35,
15 wherein the driver identifier includes both a driver name and a driver version.

16
17 **38. (Previously Presented)** The computer-readable media of claim 35,
18 wherein the driver identifier is used to access a library at the server that stores the
19 plurality of drivers.

20
21 **39. (Previously Presented)** The computer-readable media of claim 35,
22 wherein:

23 the driver identifier is used to check whether any of the plurality of drivers
24 has a corresponding driver identifier that is the same as the received driver
25 identifier; and

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1 if a particular driver of the plurality of drivers has a corresponding driver
2 identifier that is the same as the received driver identifier, then select that driver to
3 install at the server.

4
5 40. (Previously Presented) The computer-readable media of claim 35,
6 wherein:

7 the driver identifier is used to check whether any of the plurality of drivers
8 currently has a corresponding driver identifier that is different than the received
9 driver identifier but that corresponds to the same driver as the received driver
10 identifier; and

11 if a particular driver of the plurality of drivers currently has a corresponding
12 driver identifier that is different than the received driver identifier but that
13 corresponds to the same driver as the received driver identifier, then select that
14 driver to install at the server.

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16 41. (Canceled).
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